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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/902,371	07/29/97	BHATIA	R 42390.P4624

MM51/0423
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EXAMINER
LEA EDMONDS, L

ART UNIT	PAPER NUMBER
2835	7

DATE MAILED: 04/23/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/902,371

Applicant(s)

Rakesh Bhatia

Examiner

Lisa Lea-Edmonds

Group Art Unit

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☒ Responsive to communication(s) filed on Feb 16, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 12-24 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 12-24 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12, 14, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penniman et al. et al. in view of Ohashi et al.. With respect to claims 12, 14, 15, and 20, Penniman et al. teaches a portable computer having a keyboard with a thermally conductive support plate (28), a flat heat pipe (34) which covers a portion of the bottom surface of the keyboard support plate, and a heat generating device (42) thermally coupled to the heat pipe. However, Penniman et al. lacks the teaching of an air moving means. Ohashi et al. teaches a fan (4) and a fin (45) being used to move air throughout a portable computer for cooling. It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the fan structure of Ohashi et al. with the teachings of Penniman et al. to increase air flow in the portable computer.

3. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Penniman et al. in view of Ohashi et al. as applied to claim 12 above, and further in view of Carlsten et al.. Penniman et al. et al. teaches a portable computer as claimed in claim 12, however, Penniman et

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al. lacks the teaching of a flat heat pipe having micro channels. Carlsten et al. teaches a flat heat pipe having micro channels (see for example any of figures 1-6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the flat heat pipe structure of Carlsten et al. with the teachings of Penniman et al. to increase fluid flow in the flat heat pipe.

4. Claims 16-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penniman et al. et al. et al. et al. as applied to claims 12, 14, 15 and 20 above, in view of Ohashi et al., and in further view of Dinh et al.. With respect to claims 16-19 and 21-22, Penniman et al. in view of Ohashi et al. teaches a portable computer as claimed in claims 12, 14, 15 and 20. However, Penniman et al. as modified by Ohashi et al. lacks the teaching of a temperature sensing device and a control circuit for switching the fan on and off. Dinh et al. teaches a temperature dependent fan control circuit which senses the heat from any heat producing element within a personal computer and adjusts the voltage applied to the fan. It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the temperature dependent fan control circuit of Dinh et al. with the teachings of Penniman et al. and Ohashi et al. to protect the portable computer from over heating and/or damage due to excess heat.

5. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penniman et al. et al. et al. in view of Ohashi et al., and in further view of Dinh et al.. With respect to claims 23 and 24, Penniman et al. teaches a portable computer having a keyboard with a thermally conductive support plate (28), a flat heat pipe (34) which covers a portion of the

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bottom surface of the keyboard support plate, and a heat generating device (42) thermally coupled to the heat pipe. However, Penniman et al. lacks the teaching of an air moving means. Ohashi et al. teaches a fan (4) and a fin (45) being used to move air throughout a portable computer for cooling. Penniman et al. as modified by Ohashi et al. lacks the teaching of a temperature sensing device and a control circuit for switching the fan on and off. Dinh et al. teaches a temperature dependent fan control circuit which senses the heat from any heat producing element within a personal computer and adjusts the voltage applied to the fan. It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the fan structure of Ohashi et al. with the teachings of Penniman et al. to increase air flow in the portable computer. It also would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the temperature dependent fan control circuit of Dinh et al. with the teachings of Penniman et al. as modified by Ohashi et al. to protect the portable computer from over heating and/or damage due to excess heat.

Response to Arguments

6. Applicant's arguments filed 02/16/99 have been fully considered but they are not persuasive. It is the examiners position that the combination of Penniman et al., Ohashi et al. and Dinh et al. meet all of the claimed limitations as cited in the above rejection. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

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See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Also in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one of ordinary skill in the art would in fact add a fan to any computer system having heat generating components to aid in the removal of heat therein and also provide controlling circuitry to prevent over heating of the fan and/or the computer system.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37


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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please note the temperature control apparatus of Malladi et al..
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Lea-Edmonds whose telephone number is (703) 305-0265. The examiner can normally be reached on Monday - Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, L. Feild, can be reached on (703) 308-2710. The fax phone number for this Group is (703) 305-3431,32

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-1782.

LL-E 
April 21, 1999



LYNN D. FEILD
PRIMARY EXAMINER